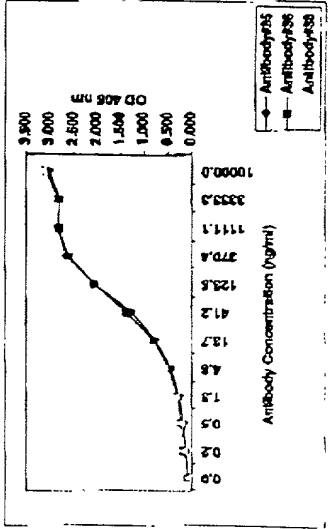
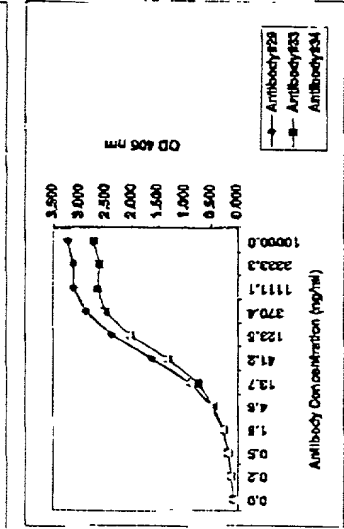
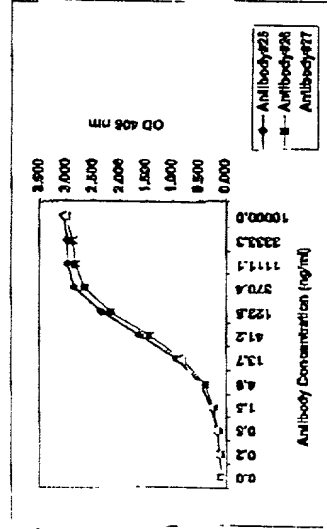
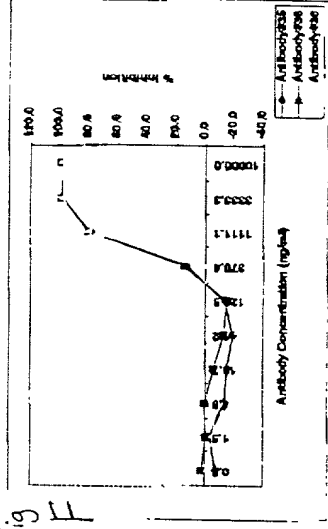
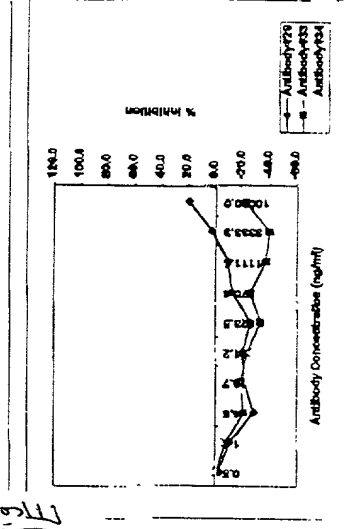
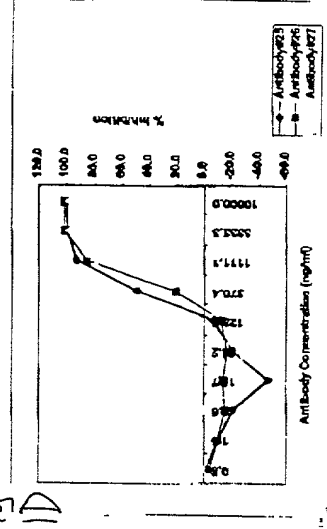


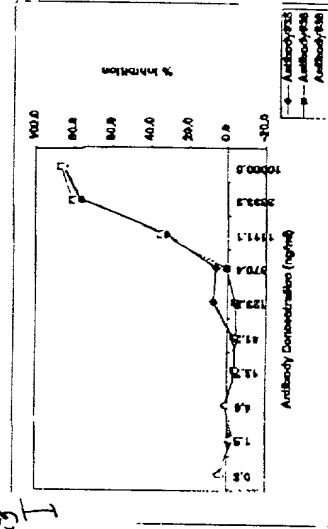
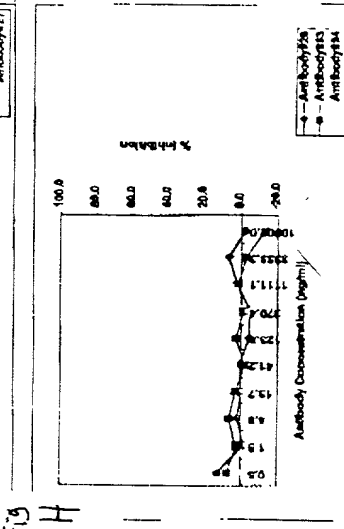
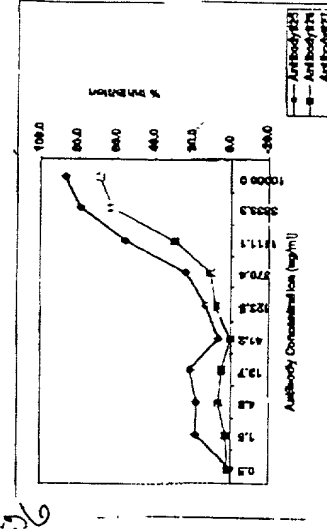
Binding of antibodies to CTLA-4



Blockage of CD86 binding



Blockage of CD80 binding



Anti-CTLA4 Abs #25, #26, and #29 defined three distinct epitopes on CTLA4

CTLA4 point mutant	Antibody #25
Mock	0.166
WT	1.17
T67	0.935
Q82	1.1
R85	0.96
D63	0.988
R38	0.52
S64	1.07
I65	1.19
L61	1.14
T45	0.948
E46	0.811
D62	0.965
CTLA4-Ig	0.996
DME	0.14

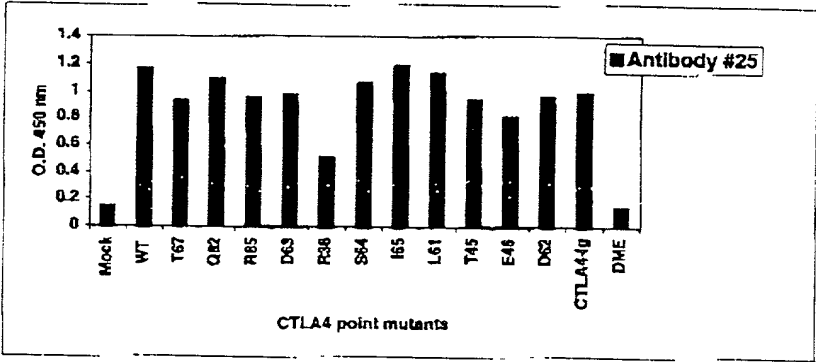


Fig.
2A

CTLA4 point mutant	Antibody #26
Mock	0.174
WT	1.16
T67	0.944
Q82	1.07
R85	0.976
D63	0.979
R38	0.636
S64	1.1
I65	1.17
L61	1.19
T45	0.948
E46	0.16
D62	0.974
CTLA4-Ig	1.1
DME	0.163

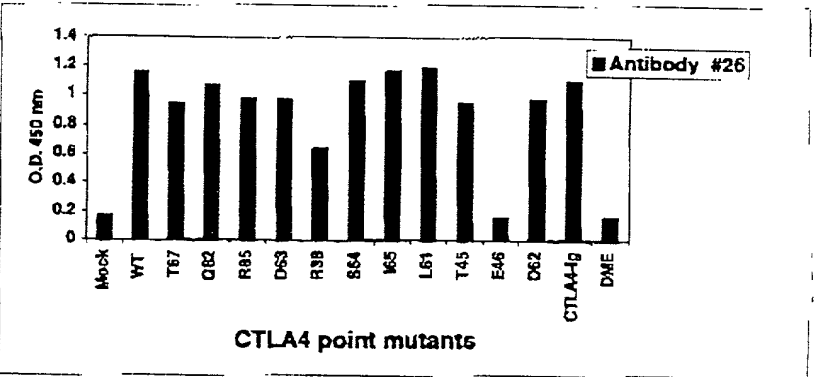


Fig.
2B

CTLA4 point mutant	Antibody #29
Mock	0.094
WT	0.82
T67	0.695
Q82	0.784
R85	0.096
D63	0.719
R38	0.364
S64	0.753
I65	0.801
L61	0.819
T45	0.695
E46	0.809
D62	0.673
CTLA4-Ig	0.657
DME	0.091

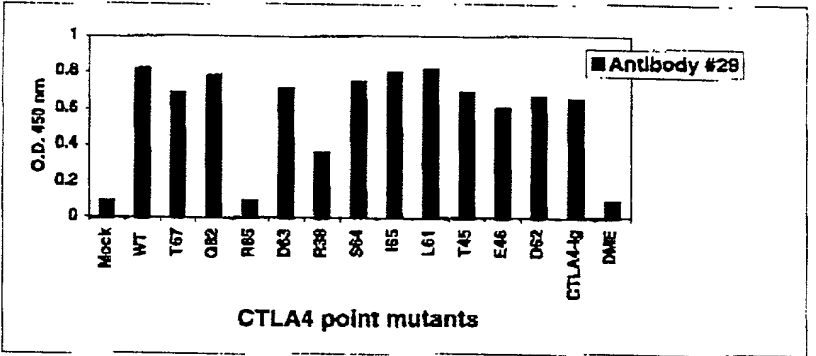


Fig.
2C

Fig 3A Proliferation

	media	Ab #25	Ab #26	Ab#27	Ab#29	Ab#33	Ab#34	Ab#35	Ab#36	Ab #38
Donor 1	54871	16589	33928	49492	234	928	45524	56203	72358	50665
Donor 2	102159	32784.3	58736.2	79098.2	1891.3	5427.4	78391.9	91920.2	116454.6	88937.3

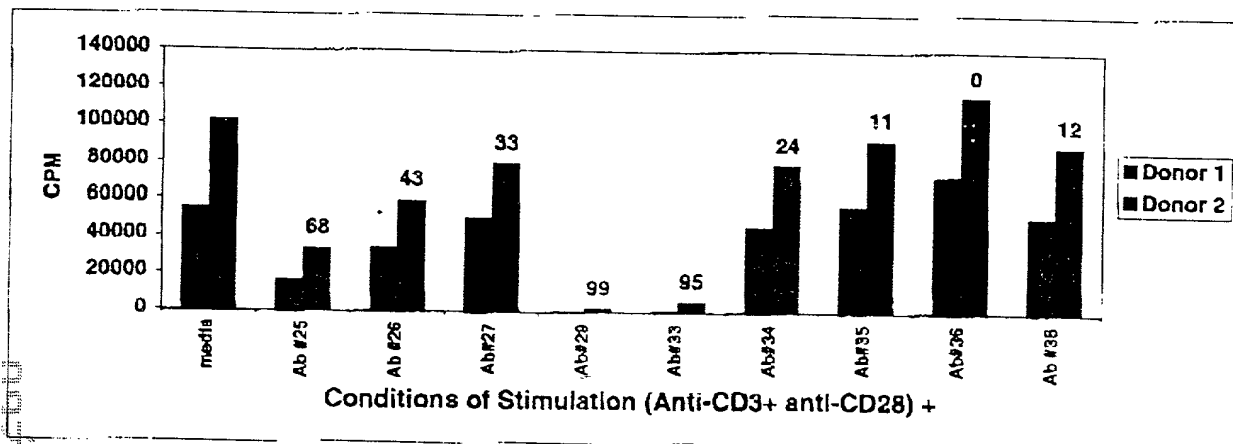


Fig 3B IL-2 Production

	media	Ab #25	Ab #26	Ab#27	Ab#29	Ab#33	Ab#34	Ab#35	Ab#36	Ab #38
IL-2(pg/ml)	2125.3	330.2	182.5	231.7	60.8	462.3	573.7	305.7	617.7	672.1

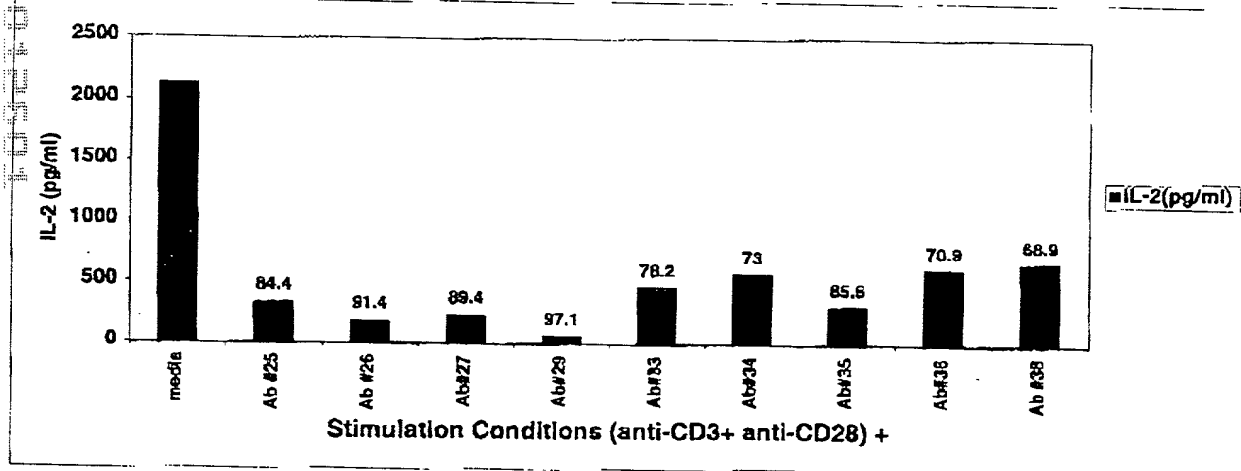


Fig. 4A Proliferation

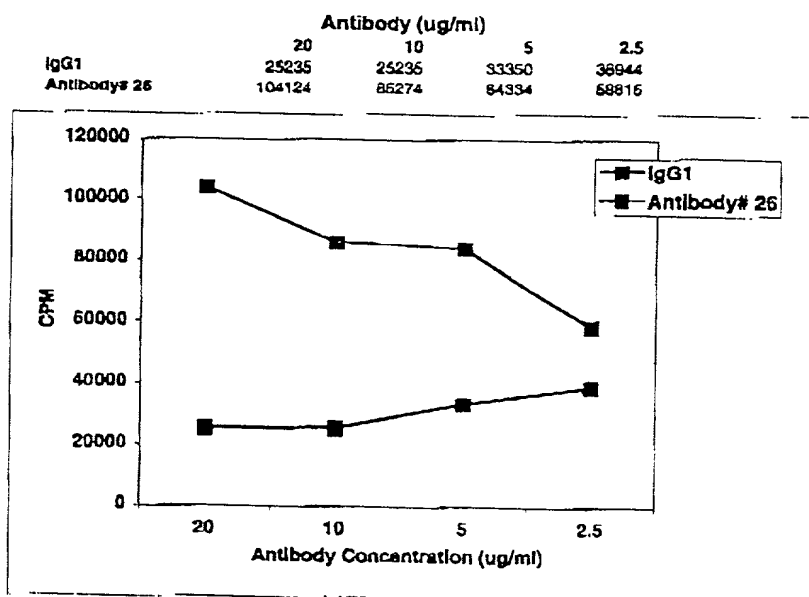
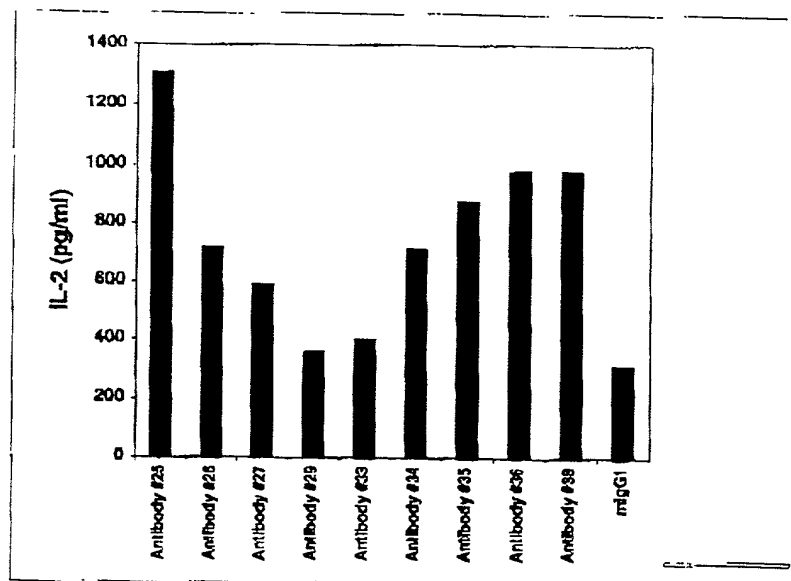


Fig 4B IL-2 Production

Antibody	IL-2 (pg/ml)
Antibody #25	1310
Antibody #26	720
Antibody #27	594
Antibody #29	358
Antibody #33	400
Antibody #34	715
Antibody #35	875
Antibody #36	982
Antibody #38	982
mgG1	317



FACS Competition Using FITC-Labeled CTLA4-26B with Cold CTLA4-26B and Humanized IgG1/κ

Name	Cell Line	Primary Ab	Competitor
052199.001	CHO.CTLA4	FITC-CTLA4-26B 125 ng	2000 ng
052199.002			1000 ng
052199.003			500 ng
052199.004			250 ng
052199.005			100 ng
052199.006	CHO.B7.1	none 125 ng none	IgG1/κ
052199.007			2000 ng
052199.008			1000 ng
052199.009			500 ng
052199.010			250 ng
052199.016			100 ng
052199.017			none
052199.018			none
052199.019			none
			none
			none
			none
			none
			none

Fig 6A

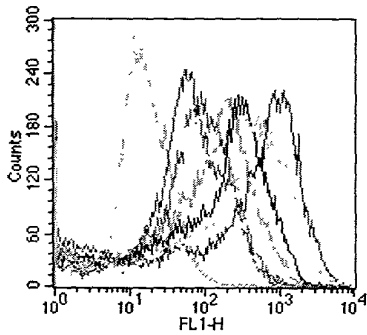


Fig 6B

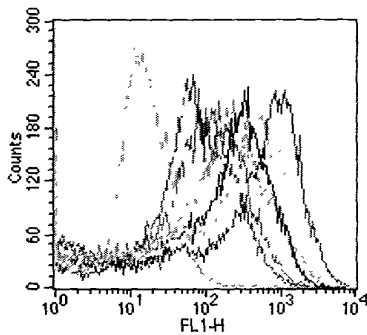
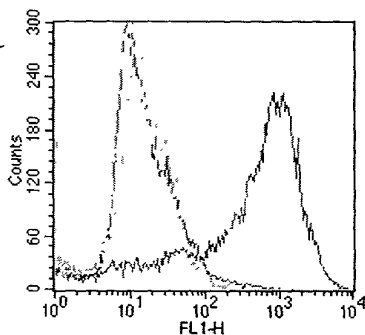


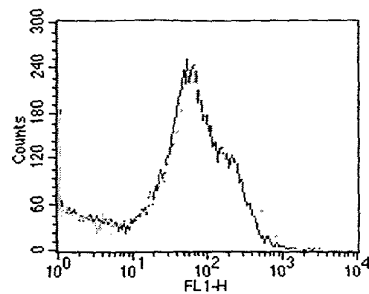
Fig 6C



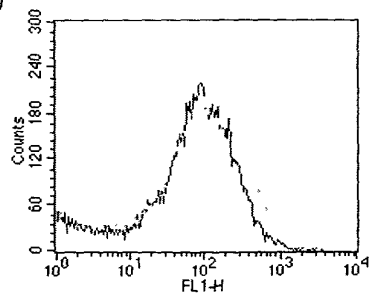
Key	Name	Parameter	Gate
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---	052199.017	FL1-H	No Gate
---	052199.001	FL1-H	No Gate
---	052199.002	FL1-H	No Gate
---	052199.003	FL1-H	No Gate
---	052199.004	FL1-H	No Gate
---	052199.005	FL1-H	No Gate

Key	Name	Parameter	Gate
---	052199.016	FL1-H	No Gate
---	052199.017	FL1-H	No Gate
---	052199.006	FL1-H	No Gate
---	052199.007	FL1-H	No Gate
---	052199.008	FL1-H	No Gate
---	052199.009	FL1-H	No Gate
---	052199.010	FL1-H	No Gate

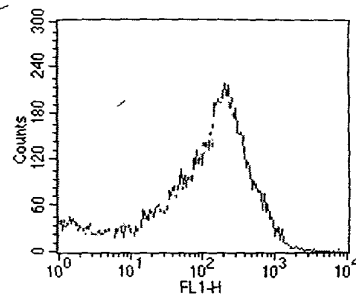
Key	Name	Parameter	Gate
---	052199.016	FL1-H	No Gate
---	052199.017	FL1-H	No Gate
---	052199.018	FL1-H	No Gate
---	052199.019	FL1-H	No Gate

Fig.
7A

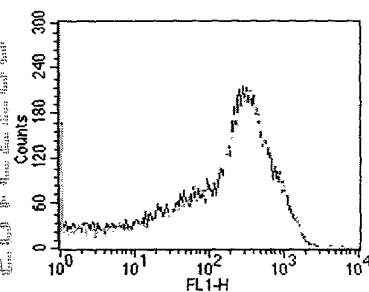
Key	Name	Parameter	Gate
—	052199.001	FL1-H	No Gate
—	052199.006	FL1-H	No Gate

Fig.
7B

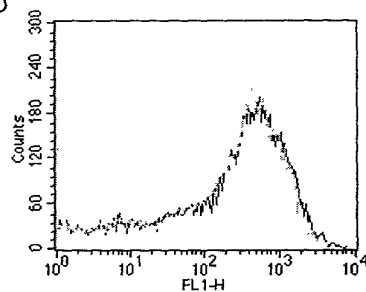
Key	Name	Parameter	Gate
—	052199.002	FL1-H	No Gate
—	052199.007	FL1-H	No Gate

Fig.
7C

Key	Name	Parameter	Gate
—	052199.003	FL1-H	No Gate
—	052199.008	FL1-H	No Gate

Fig.
7D

Key	Name	Parameter	Gate
—	052199.004	FL1-H	No Gate
—	052199.009	FL1-H	No Gate

Fig.
7E

Key	Name	Parameter	Gate
—	052199.005	FL1-H	No Gate
—	052199.010	FL1-H	No Gate

Figure 7

Fig 8A

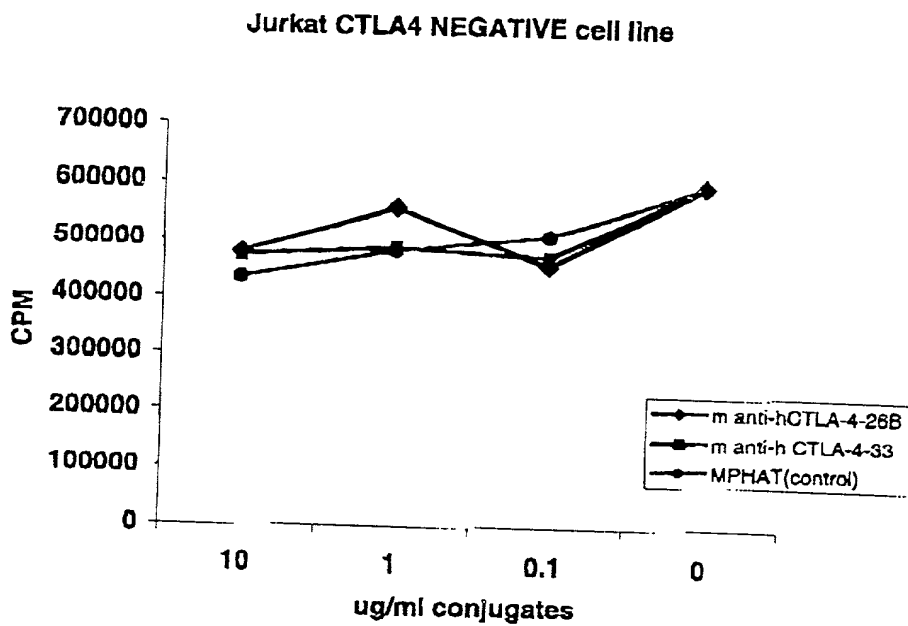
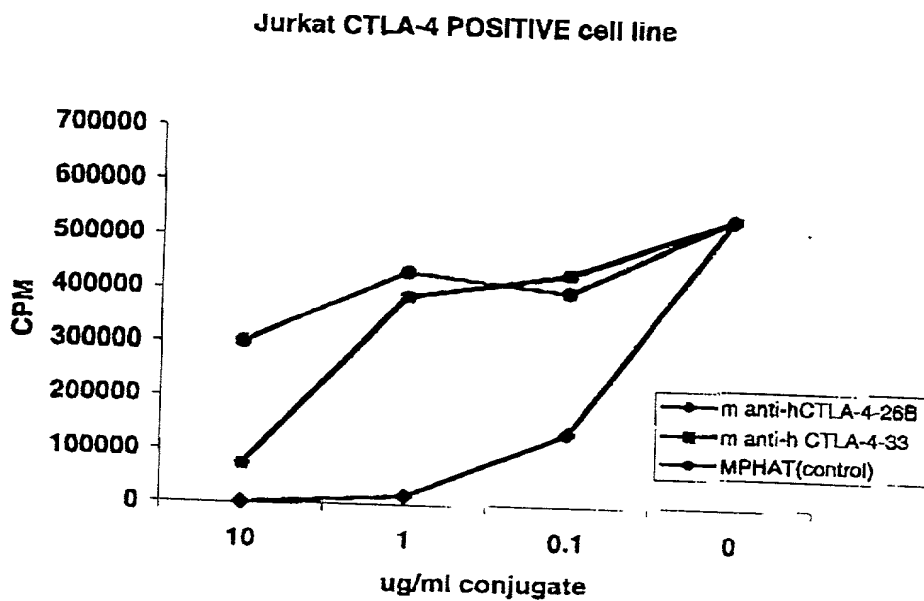


Fig 8B



HuCTLA4 - Vk

TATATCTAGACCACCATGGATTTTCAAGTGCAGATCTTCAGCTTCCTGCTAATCAGTGCC
M D F Q V Q I F S F L L I S A

TCAGTCATACTGTCCAGAGGAGATATCCAGATGACCCAGTCTCCATCCTCCCTATCCGCA
S V I L S R G D I Q M T Q S P S S L S A

TCTGTTGGGGACAGGGTCACCATAACCTGTAGTGCCACCTCAAGTATAACTTACATGTCC
S V G D R V T I T C S A T S S I T Y M S

TGGTATCAGCAGAAGCCAGGAAAGGCTCCCAAGCTTCTGATTTATGACACATCCAACCTG
W Y Q Q K P G K A P K L L I Y D T S N L

GCTTCTGGGGTACCTAGCCGCTTCAGTGGCAGTGGGTCTGGGACCGACTACACACTCACA
A S G V P S R F S G S G S G T D Y T L T

ATCAGCAGCCTGCAGCCAGAAGATTTTGCCACTTATTACTGCCAGCAGTGGAGTAGTTAC
I S S L Q P E D F A T Y Y C Q Q W S S Y

CCGCTCACGTTTCGGTGGAGGGACCAAGGTTGAGATAAAACGTAAGTAGAATCCAAAGTCT
P L T F G G G T K V E I K

AGATATA

Figure 9

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2
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ACCCTAGTCACAGTCTCCTCAGGTGAGTCCTTAAACCTCTAGATATA
T L V T V S S

Figure 10

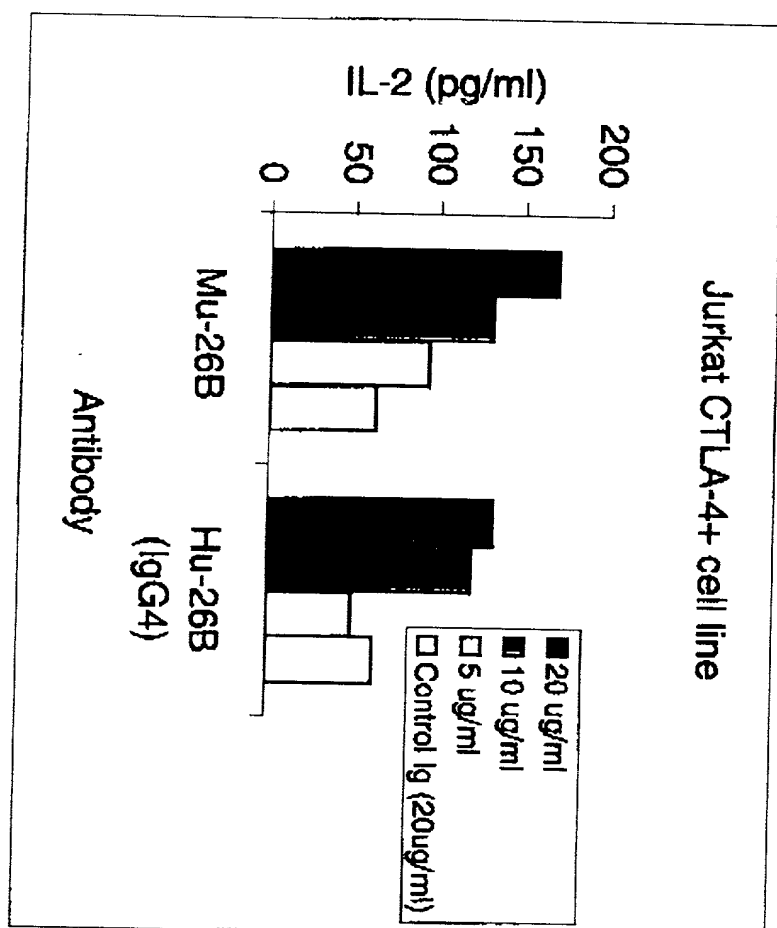


Figure 11